Amendments to the Specification

Please insert the following paragraphs in place of the corresponding paragraphs as pending before entry of this amendment.

[0038] The present invention also showed that Luteolin, when administered orally to the animals already showing impaired airways features, alleviated the existing impaired features. Luteolin has been found to increase [IFN □] IFN-gamma levels and attenuated IL-5 levels in the bronchoalveolar lavage (BAL) fluid. The allergen-specific IgE levels in the sera samples were also reduced significantly.

[0050] In still another embodiment of the present invention, wherein asthma is an inflammatory disease of the airways, which affects millions of people worldwide. The disease is reaching epidemic proportions and young lives are increasingly rendered unproductive. Asthma is characterized by difficulty in breathing due to constriction of smooth muscles of the bronchi as a result of inflammation. It is characterized by elevated levels of immunoglobulin E in the blood and infiltration of eosinophils into the airways. The development of the disease is mediated by cytokines- IL-4 and IL-5, IgE, eosinophils and various other mediators e.g. leukotrienes, cyclooxygenase products, phospholipases all of which lead to the symptoms of asthma (Abbas et al., 1994, Weiss et. al., 1993). In contrast, [IFN □] IFN-gamma inhibits this process (Barnes, 2000).

[0074] To investigate the levels of IL-4 and [IFN –□] IFN-gamma in the BALF, we measured the cytokine levels by ELISA as per manufacturer's protocol, and compared between the different groups. As shown in Table 1, serum levels of IFN-gamma were significantly elevated in OVA sensitized mice treated with Luteolin, whereas in the untreated OVA-sensitized mice, IgE levels were reduced. In the Luteolin-treated group, there was an increase in the ratio of IFN-gamma/IL-4 (25.8.+-.2.7, 15.5.+-.1.3, 13.2.+-.2.5 following doses of 0.1, 1.0 and 10.0 mg/kg Luteolin, respectively as compared to 0.48.+-.0.1 in sensitized, vehicle treated mice) ($p<0.01$) (Table 1). In the mice first sensitized and then treated with Luteolin (1.0 mg/kg) for one week, the ratio of IFN-gamma./IL-4 was also increased (16.+-.2.2) ($p<0.01$) as compared to sensitized, vehicle treated mice. This increase in the IFN-gamma/IL-4 ratio was due to the increase in the IFN-gamma. levels. We also measured the concentration of IL-5 in the BALF by ELISA in the different groups (Table 1). In the Luteolin-treated group, a decrease in the levels of IL-5 was seen (73.3.+-.13.4 and 43.3.+-.3.5 following doses of 0.1 and 1.0 mg/kg Luteolin respectively as compared to 148.5.+-.3.5 in sensitized, vehicle treated mice)(Table 1). In the sensitized mice treated with Luteolin (1.0 mg/kg) for one week, the IL-5 level was decreased (43.7.+-.2.3) as compared to sensitized, vehicle treated mice.